

REMARKS

Reconsideration is requested.

Claims 1-51 are pending. Claims 4, 7, 8, 12 and 17-48 have been withdrawn from consideration.

The Examiner's comment regarding the cross-reference to the priority applications in the first line of the specification (see page 3 of the Office Action dated October 18, 2007) is not understood and clarification is requested. Specifically, the specification was amended June 28, 2004 to include an indication that "This application is the US national phase of international application PCT/JP02/13650 filed 26 December 2002, which designated the US and claims benefit of JP 2001-400677 filed 28 December 2001, the entire contents of each of which are incorporated herein by reference." Clarification is requested in the event anything further is required in this regard.

A certified copy of the priority document is attached. Acknowledgement of receipt of the attached in the Examiner's next Action is requested.

The Examiner is requested to return a completely-initialed copy of the PTO-1449 Form bearing the OIPE date-stamped of April 13, 2006. Specifically, the PTO-1449 Form returned with the Office Action of October 18, 2007, does not include the Examiner's initials next to U.S. Patent No. 6,310,184. The entirety of the PTO-1449 Form has been initialed by the Examiner on August 20, 2007, and the other references indicated as having been specifically considered by initialing next to each of the references. U.S. Patent No. 6,310,184 however does not include in the left-hand

column the Examiner's initials. A completely-initialed copy of the PTO-1449 Form filed April 13, 2006, pursuant to MPEP § 609, is requested.

The Examiner is also requested to confirm that the figures filed July 12, 2005, are acceptable or advise the undersigned of any specific objection or rejection of the same.

The objection to the specification for allegedly including browser executable code at page 4, line 20 is noted. See page 4 of the Office Action dated October 18, 2007. Clarification is requested as to have may be further required in this regard as page 4, line 20 of the filed application is believed to be, in full, "of joints (Chiryo, 78, 3553-3558, Nanzando, 1996). In " which is not believed to include browser executable code.

The Section 112, second paragraph, rejection of claims 3, 5-11 and 13-16 is believed to be obviated by the above amendments. Reconsideration and withdrawal of the Section 112, second paragraph, rejection of claims 3, 5-11 and 13-16 are requested.

To the extent not obviated by the above amendments, the Section 112, first paragraph, rejection of claims 1-3, 5-6, 9-11 and 13-16 is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following comments.

The revisions to claims 11 and 13 above are believed to obviate the basis for the rejection stated in §A. on pages 5-7 of the Office Action dated October 18, 2007. The Examiner is requested to advise the undersigned if anything further is required in this regard.

The revisions to claims 1 above are believed to obviate the basis for the rejection stated in §B. on pages 7-9 of the Office Action dated October 18, 2007. The Examiner is requested to advise the undersigned if anything further is required in this regard.

The applicants note that transformant KM8037 producing human CDR-grafted antibody HV0LV6 was deposited under conditions of the Budapest Treaty as FERM BP-8084 in International Patent Organism Depository, National Institute of Advanced Industrial Science and Technology (AIST Tsukuba Central 6, 1-1-1 Higashi, Tsukubashi Ibaraki, 305-8566, Japan) on June 20, 2002, as described on page 32 of the present application. A copy of the Deposit Receipt is attached.

The applicants affirm that access to the deposited material will be irrevocably removed upon the grant of a patent in the U.S. containing claims to the deposited material. The irrevocable release of the deposited material is being made without prejudice, to obviate the Section 112, first paragraph, rejection.

Withdrawal of the Section 112, first paragraph "enablement", rejection of claims 1-3, 5-6, 9-11 and 13-16 is requested.

The Section 103 rejection of claims 1-3, 5-6, 9-10, 16 and 49-51 over Baird (U.S. Patent No. 6,037,329), Hanai (U.S. Patent No. 5,952,472) and Owen (Journal of Immunological Methods, 1994, 168:149-165) is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following distinguishing comments.

Initially, the applicants note that Baird teaches "major problems" exist with methods of administering antibodies, such as that

"antibodies may react with more than one cell surface molecule, thereby effecting delivery to multiple cell types, possibly including normal cells. Second, even if the antibody is specific, the antibody reactive molecule may be present on normal cells."

The patent describes compositions having a receptor-binding internalized ligand-nucleic acid binding domain-cytocide-encoding agent., which allegedly overcomes at least the above-noted "major problems" of therapies involving antibodies.

The cited Baird patent therefore, at a minimum, teaches away from an antibody therapy, such as the presently claimed invention.

The Examiner is understood to believe that Baird teaches a method of treating arthritis, and in particular rheumatoid arthritis, "comprising administering an inhibitor of FGF-8". See page 10 of the Office Action dated October 18, 2007.

In fact, the cited patent teaches that

"FGFs exhibit a mitogenic effect on a wide variety of mesenchymal, endocrine and neural cells and are also important in differentiation and development. Of particular interest is their stimulatory effect on collateral vascularization and angiogenesis. In some instances, FGF-induced mitogenic stimulation may be detrimental. For example, cell proliferation and angiogenesis are an integral aspect of tumor growth. Members of the FGF family, including bFGF, are thought to play a pathophysiological role, for example, in tumor development, rheumatoid arthritis, proliferative diabetic retinopathies and other complications of diabetes. To reduce or eliminate mitogenesis, muteins of FGF are constructed as described below. Such muteins retain the ability to bind to high and low affinity receptors. "

The patent therefore teaches that bFGF (i.e., basic FGF, or FGF-2 (see col. 7, lines 38-57 and col. 9, lines 38-56 of Baird) may play a roll in rheumatoid arthritis.

Baird states that " FGF-8 may have oncogenic potential". See col. 10, lines 49-50 of Baird.

The only common function amongst the FGFs which is believed to be described in Baird is the ability to induce mitogenic activity in a wide variety of normal diploid mesoderm-derived and neural crest-derived cells. See the paragraph spanning cols. 17-18 of Baird.

There is no teaching or suggestion in the cited Baird patent of "a method of treating arthritis, in particular, rheumatoid arthritis, comprising administering an inhibitor of FGF-8", as alleged by the Examiner on page 10 of the Office Action dated October 18, 2007.

The Examiner specifically refers the applicants to the "entire document", column 10, last paragraph, column 25, first full paragraph, column 47, last full paragraph and column 48, first full paragraph of Baird for support.

As noted above, the whole of Baird (i.e., the "entire document") includes a teaching away from the use of antibody therapy, such as described in the presently-claimed invention.

The passage of column 10, last paragraph is reproduced above wherein Baird teaches that FGFs exhibit a mitogenic effect.

Column 25, first full paragraph, of Baird describes FGF-8, as well as other proteins, as a "growth factor" involved in "cell proliferation". See column 25, lines 15-18 of Baird.

Column 47, last full paragraph, of Baird states that "Basic FGF-mediated" (i.e., bFGF-mediated) pathophysiological conditions include rheumatoid arthritis. The absence of mention of FGF-8 in this passage of Baird would suggest to one of ordinary skill in the art that only b-FGF, and not FGF-8, is involved in rheumatoid arthritis. The passage of Baird is believed therefore to teach away from the present invention.

Column 48, first full paragraph, of Baird is believed to be an extension of the previous paragraph, relating to "HBEGF-mediated pathophysiological conditions". FGFs are not believed to be mentioned in the first full paragraph of column 48 of Baird.

In view of all of the above, the applicants respectfully submit that the cited Baird patent fails to teach or suggest the claimed invention, and arguably teaches away from the claimed invention.

The secondary references, i.e., Hanai and Owen, are not believed to cure the deficiencies of Baird.

Specifically, Hanai is not believed to teach or suggest the use of antibodies for treating arthritis, as claimed. The Examiner is not relying on Hanai for such a teaching. Hanai states that an antibody specific for FGF-8 will be useful for the analysis of the role and biological function of FGF-8 in the indicated tumor cells and also for the diagnosis of prostatic cancer, breast cancer "and the like by immunological detection." See col. 1, lines 46-53 of Hanai.

The Examiner states that Hanai teaches "using the anti-FGF-8 monoclonal antibody which is produced from a hybridoma to treat diseases (see Background and

Summary of the Invention in columns 1-2)." See page 11 of the Office Action dated October 18, 2007.

Hanai is not believed however to teach or suggest the claimed method.

The cited Owen reference is not believed to cure the deficiencies of Baird. The Examiner has cited the reference for a teaching of how to make antibodies. See page 12 of the Office Action dated October 18, 2007.

Withdrawal of the Section 103 rejection is requested.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned in the event anything further is required.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /B. J. Sadoff/
B. J. Sadoff
Reg. No. 36,663

BJS:
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100